To: Leinenbach, Peter[Leinenbach.Peter@epa.gov]
From: MICHIE Ryan
Sent: Mon 4/1/2013 4:39:56 PM
Subject: RE: Upslope Transport and Deposition model documentation
Thoughts on vegetation density in Heat Source v20110909.docx

Is this what you are looking for?

From: Leinenbach, Peter [mailto:Leinenbach.Peter@epa.gov]
Sent: Friday, March 29, 2013 4:13 PM
To: MICHIE Ryan
Subject: RE: Upslope Transport and Deposition model documentation

Thanks Ryan –

What I think? – You are smart – that is what I think.

I will take a look at these documents at get back with you

Ryan, I was wondering if you have access to an internal document that you and Dan (RIP – I hope the Corps is treating him well) worked on about using LIDAR with the shade tool (described the problems and potential solutions) . Last year Dan sent me a copy of it after our modelers meeting, but I cannot find it now (It is as if all files from Dan are gone from my computer). Folks in Idaho DEQ are currently struggling with these same issues. I was wondering if you have access to this document and if you could forward it to me – and I will forward it to them. Thanks

From: MICHIE Ryan [mailto:Michie.Ryan@deq.state.or.us]
Sent: Friday, March 29, 2013 1:40 PM
To: Leinenbach, Peter
Subject: RE: Upslope Transport and Deposition model documentation

Attached is the Benda and Cundy paper.

The Benda and Cundy paper and the Miller paper mostly deal with debris flow transport in confined channels as opposed to open slope transport. Since most of the confined channels have a stream in them I'm mostly looking for open slope transport.

The ODF method is one of the few sources that I have been able to find that discusses this aspect. only source The report is here: http://www.oregon.gov/odf/privateforests/docs/landslidetechnote6.pdf.

ODF's method is not hard and fast but the basic rule is that material will travel down slope until it reaches a slope of less than 40% for at least 50 feet, unless there are obstructions or barriers (eg vegetation),it intersects a confined channel with water, or there is a large junction angle (reducing its energy).

I'm leaning toward using the ODF method or a modified version of it but I suspect Lee Benda and or Dan Miller may have something that they use. I still need to chat with them. Whatever we use I will have to create a script to make it run over a very large area.

I'd love to hear what you think.

From: Leinenbach, Peter [mailto:Leinenbach.Peter@epa.gov]
Sent: Friday, March 29, 2013 12:35 PM
To: MICHIE Ryan
Cc: Wu, Jennifer
Subject: Upslope Transport and Deposition model documentation

Hi Ryan –

I was looking over the handout from you recent presentation on the proposed Shallow Landslide Approach. I wanted to ask you if you could send me links (documents) on two of the potential upslope transport and deposition models you are looking into for this project. I was able to quickly find the Miller and Burnett 2008 document, but I am not able to locate the papers associated with ODF method, and the Benda and Cundy method. Is it possible for you to forward me copies of these documents? Also, which tool do you think you will use? (e.g., pros and cons of each)

Thanks in advance for the help.

Peter Leinenbach

Aquatic and Landscape Ecologist

U.S. Environmental Protection Agency - Region 10

Office of Environmental Assessment